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EXAMINER

EOFF, ANCA

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,868	<b>Applicant(s)</b> OKAZAKI ET AL.	
	<b>Examiner</b> ANCA EOF	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 15-20 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 15-20 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-9, 11, 15-20 and 23-29 are pending in the application. Claims 10, 12-14 and 21-22 have been canceled.
2. The foreign priority documents JP 2003-288288, filed on August 6, 2003 and JP 2004-029979, filed on February 05, 2004 were received and acknowledged. However, in order to benefit of the earlier filing dates, certified English translations are required.

### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 09, 2009 has been entered.

### ***Claim Rejections - 35 USC § 102 and 35 USC § 103***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gobran et al. (US Patent 3,624,055).

Claims 15, 17 and 18 are product-by-process claims. Even though the claim is directed to a process, the patentability is determined by the product itself.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (MPEP 2113- Product-by-Process Claims)

With regard to claims 15, 17 and 18, Gobran et al. disclose a cured product (column 1, lines 12-13), which anticipates or, in the alternative, renders obvious the cured product of the instant application.

6. Claims 20 and 23-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakane et al. (US Patent 4,975,922).

Claims 20, 23 and 24 are product-by-process claims. Even though the claim is directed to a process, the patentability is determined by the product itself (MPEP 2113).

With regard to claims 20, 23 and 24, Sakane et al. disclose a coating film (column 4, line 16), which anticipates or, in the alternative, renders obvious the coating film of the instant application.

With respect to claim 25, Sakane et al. further disclose that the coating film is applied on surfaces of optical products (column 4, lines 16-22).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

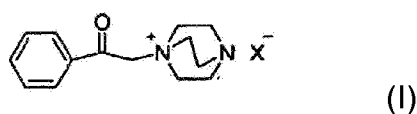
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-9, 11, 16, 19 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amagai et al. (US Patent 5,807,975) in view of Tachi et al. ("Photochemical Reactions of Quaternary Ammonium Dithiocarbamates as Photobase Generators and Their Use in the Photoinitiated Thermal Crosslinking of Poly(glycidyl methacrylate)"), as evidenced by Haniu et al. (US Pg-Pub 2002/0179241) and in further view of Hojo et al. (US Pg-Pub 2003/0129385).

With regard to claims 1 and 28-29, Amagai et al. disclose alkyl sulfide type episulfide compounds with thiirane rings (see formula (I) in column 3). These compounds can be cured in the presence of a curing catalyst to prepare an optical material. In this polymerization, any of the known curing catalysts for epoxy resins can be used (column 9, lines 51-57).

However, Amagai et al. fail to disclose that the photobase generators of formula (1) are used for the curing of the episulfide compounds.

Tachi et al. disclose a process of crosslinking poly(glycidylmethacrylate) (polymer with epoxy groups) and the use of quaternary ammonium salts of formula (I) as photobase generators:



where  $X^-$  is dimethyldithiocarbamate,  $Br^-$ ,  $Ph_4B^-$  (tetraphenylborate),  $SCN^-$  (thiocyanate),  $F_4B^-$  (tetrafluoroborate) (page 1331, figure 1).

The quaternary ammonium salts of formula (I) meet the limitations for the photobase generator of formula (1) in claim 1 of the instant application, where Ar is phenyl, R is hydrogen and  $A^+$  is 1,4-diazobicyclo (2.2.2) octane.

The quaternary ammonium salt represented by formula (I), where  $X^-$  is a dimethyldithiocarbamate anion is good photobase generator and acts as effective photoinitiated thermal crosslinker for poly(glycidylmethacrylate) films (page 1341, Summary). Also, the quaternary ammonium salt of formula (I), where  $X^-$  is a tetraphenylborate anion produces the photochemical insolubilization of poly(glycidylmethacrylate) (page 1340).

However, it is known in the art that epoxyacrylates, such as glycidyl methacrylate are cured by crosslinking, as evidenced by Haniu in par.0157.

Therefore, the process of crosslinking of poly(glycidyl methacrylate) of Tachi et al. is a process of curing the poly(glycidyl methacrylate) and the photobase generator (I) acts as curing catalyst for poly(glycidyl methacrylate).

Poly(glycidyl methacrylate) is an epoxy-group containing resin.

Therefore, it would have been obvious for one of ordinary skill in the art to use the quaternary ammonium salts disclosed by Tachi et al. as curing catalysts/photobase generators for the episulfide compounds with thiirane rings of Amagai et al., based on Amagai's teachings that any curing catalyst used for curing epoxy resins can be used to cure the episulfide compounds (Amagai et al., column 9, lines 54-56).

Amagai et al. further disclose that the photocurable composition is used as an optical material (abstract). Amagai et al. further disclose that an internal/external release agent can be added to the composition (column 12, lines 30-34) but fail to specifically disclose a modified silicone oil.

Hojo et al. teach a photocurable resin composition used in the field of optical materials, said resin comprising modified silicone oil as release agent with very high releaseability (par.0148 and par.0150).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to include the modified silicone oil as release agent as disclosed by Hojo et al. in the modified composition of modified Amagai et al., in order to take advantage of the high releaseability properties of the modified silicone oil.

Hojo et al. further disclose that the release agent (such as a modified silicon oil) is used in an amount of 0.1 to 30% by weight in the total solids of the photocurable resin composition (par.0155).

Hojo et al. further disclose that the photocurable composition comprises 5 to 50% by weight of monomers or oligomers (par.0161) so the release agent is comprised in an amount up to 15% by weight based on 100 parts monomers. This range encompasses the range for modified silicone oil (C) of the instant application.

Furthermore, Hojo et al. disclose a composition comprising 25 parts by weight of a monomer and 1 part by weight of release agent (see Composition C in par.0536-0540), wherein the release agent is 0.04% of the monomer. This value is within the range of the instant application.

The composition of Amagai modified by Tachi and Hojo comprises the same compounds as the composition of the instant application so it has the property of being cured by irradiation with light, particularly with UV light, as required by claims 28-29. The fact that Amagai et al. disclose the thermal curing of episulfides is not a proof that the composition cannot be cured by irradiation with light.

The fact that the composition of the instant application is used as "coating composition" is merely an intended use and adds no patentable weight to the claim. Therefore, the composition of Amagai modified by Tachi and Hojo is equivalent to the coating composition of the instant application.

With regard to claims 2 and 3, Tachi et al. disclose the photobase generators of formula (I) above and these photobase generators meet the limitations of claims 2 and 3

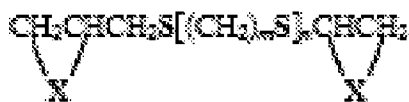


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because Ar is an unsubstituted phenyl and the anion  $X^-$  can be a borate compound, such as  $Ph_4B^-$  or  $F_4B^-$  (figure 1 on page 1331).

With regard to claims 4-6, Amagai et al. disclose that the episulfide compounds have the structures of formulas (3) and (4) of the instant application.

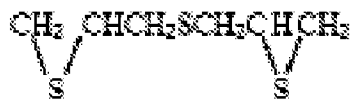
Amagai et al. disclose that the alkyl sulfide type episulfide compounds have the general formula :



where, X is S or O, m is an integer of 1 to 6 and n is an integer from 0 to 4 (column 3, lines 5-13).

Amagai et al. specifically disclose preferred compounds with X=S, n is an integer of 0 to 2 and m is an integer of 2 to 4 (column 4, lines 23-60).

Amagai et al. specifically disclose the compound having the formula:



(column 4, line 50) which meets the limitation of claim 6 of the instant application, with m,n=0.

Amagai et al. teach that values of n,m above 4 deteriorate the heat resistance and the refractive index of the optical material obtained by curing/polymerization (column 3, lines 63 – column 4, line 3).

With regard to claim 7, Tachi et al. further disclose that the quaternary ammonium salt of formula (I) with N,N-dimethyldithiocarbamate anion is soluble in organic solvents such as water, alcohols, THF (tetrahydrofuran), chloroform and DMF (page 1341, Summary). Tachi et al. further disclose a curing process of poly(glycidylmethacrylate)

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using quaternary ammonium salts of formula (I) as curing catalyst/photobase generator, the curing process taking place in THF or chloroform (page 1335).

With regard to claims 8 and 16, Amagai et al. teach that the episulfide compounds can be polymerized/cured in the presence of a curing catalyst to prepare an optical material. In this polymerization, any of the known curing catalysts for epoxy resins can be used (column 9, lines 51-57). Amagai et al. fail to disclose a method of curing using UV rays.

Tachi et al. disclose a process of curing of poly(glycidylmethacrylate) using quaternary ammonium salts of formula (I) as curing catalyst/photobase generator to form an insoluble film, said curing process taking place in THF or chloroform with 254 nm. radiation (page 1339 and page 1340).

However, it is known in the art that epoxyacrylates, such as glycidyl methacrylate are cured by crosslinking, as evidenced by Haniu in par.0157.

Therefore, the process of crosslinking of poly(glycidyl methacrylate) of Tachi et al. is a process of curing the poly(glycidyl methacrylate) and the photobase generator (I) acts as curing catalyst for poly(glycidyl methacrylate).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to use the quaternary ammonium salts (I) disclosed by Tachi et al. as curing catalysts/photobase generators for the episulfide compounds with thiirane rings of Amagai et al. in a process of curing with UV rays, based on Amagai's teachings that any curing catalyst used for epoxy products can be used to cure the episulfide compounds (Amagai et al., column 9, lines 54-56).

With regard to claims 9 and 19, Amagai et al. teach that the episulfide compounds can be polymerized/cured in the presence of a curing catalyst to prepare an optical material. In this polymerization, any of the known curing catalysts for epoxy resins can be used (column 9, lines 51-57). Amagai et al. fail to disclose a method of curing in the absence of air

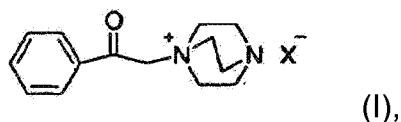
Tachi et al. further disclose that the photodecomposition rate of the photobase generator under N<sub>2</sub> was 5 times faster than that in air. For irradiation in air, unidentified peaks at 2-4 ppm were observed, due to oxidized photoproducts (pages 1337-1338).

While Tachi et al. do not specifically disclose a curing process performed in the absence of air but it would have been obvious to one of ordinary skill in the art at the time of the invention to performed the curing process under N<sub>2</sub> in order to accelerate the photodecomposition of the photobase generator and to avoid the oxidized photoproducts.

With regard to claim 11, Hojo et al. further disclose that a silane coupling agent is added to the photocurable resin in order to improve the heat resistance and adherence (par.0163).

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to include the silane coupling agent disclosed by Hojo et al. in the modified composition of modified Amagai et al., in order to improve the heat resistance.

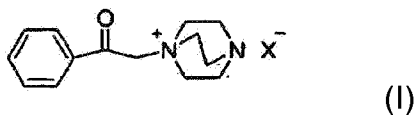
With regard to claim 26, the photo-base generator of Tachi et al. is represented by the formula (I):



wherein  $X^-$  is N, N dimethyldithiocarbamate,  $Ph_4B^-$  (tetraphenylborate),  $SCN^-$  (thiocyanate),  $F_4B^-$  (tetrafluoroborate) (page 1331, figure 1).

The compound of formula (I), wherein  $X^-$  is  $Ph_4B^-$  is identical to the photo-base generator disclosed in formula (1) on page 3 and Example 1 in the table on pages 6-9 of the specification of the instant application. Absent a record to prove the contrary, it is the examiner's position that the photo-base generator of formula (I), wherein  $X^-$  is  $Ph_4B^-$  is capable of generating 1,4-diazabicyclo(2,2,2)octane upon irradiation of ultraviolet rays. (MPEP 2112)

With regard to claim 27, Tachi et al. disclose a process of curing poly(glycidylmethacrylate) and the use of quaternary ammonium salts of formula (I) as photobase generators:



where  $X^-$  is  $Ph_4B^-$  (tetraphenylborate),  $SCN^-$  (thiocyanate),  $F_4B^-$  (tetrafluoroborate) (page 1331, figure 1).

### ***Response to Arguments***

9. Applicant's arguments filed on April 09, 2009 have been fully considered but they are not persuasive.

On pages 8-9, the applicant recites the newly amended claim 1 of the instant application and shows that the Examples 14-17 and the Comparative Examples 6-8 of the instant application show unexpected results achieved by the composition of the present invention which comprise the amounts of silicon oil recited in claim 1. The compositions show unexpected results for the wetting property and transparency.

The examiner would like to show that the Examples 14-17 use bis( $\beta$ -epithiopropyl)sulfide as the episulfide compound containing a thiirane ring. However, claim 1 recites "an episulfide compound with a thiirane ring", which encompasses a large number of compounds (see pages 9-12 of the specification) so the Examples are not considered commensurate with the scope of claim 1.

On pages 9-11 of the Remarks, the applicant shows that the amended claims provides for features not present in the prior art. The applicant's arguments have been considered. However, the rejection of the claims 1-9, 11, 15-20 and 23-29 are presented in paragraphs 4-8 of the Office Action.

On pages 12-13 of the Remarks, the applicant points to Examples 14-17 and Comparative Examples 6-8 on pages 31-33 of the specification. Said examples show unexpected results achieved by coating compositions including a modified silicone oil in the amount indicated in claim 1.

The applicant further show that Comparative Examples 6-7 comprise no modified silicone oil and a smaller amount of silicone oil than in claim 1 and Comparative Example 8 comprises an amount of silicon oil greater than the amount in claim 1. The results obtained in Comparative Examples 6-8 are unsatisfactory. In contrast, Examples

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14-17 in which the composition include modified silicone oil in amounts within the range of claim 1, show a better wetting property and transparency.

The examiner would like to show that Examples 14-17 use bis( $\beta$ -epithiopropyl)sulfide as the episulfide compound containing a thiirane ring. However, claim 1 recites "an episulfide compound with a thiirane ring", which encompasses a large number of compounds (see pages 9-12 of the specification) so the Examples 14-17 are not considered commensurate with the scope of claim 1.

On page 13 the applicant argues that Hojo et al. teach that modified silicone oil provides high releasability but do not provide any teaching regarding the transparency or wetting property.

The examiner would like to show that Amagai et al. teach that release agents may be added to the curable composition used for making optical articles. Hojo et al. teach a photocurable composition used for making optical articles, said composition comprising modified silicon oil as release agent. Therefore, one of ordinary skill in the art would be motivated to combine the teachings of Amagai and Hojo and include a modified silicon oil release agent in the composition of Amagai et al., as taught by Hojo et al.

On pages 13-15 of the Remarks, the applicant points to Comparative Examples 2-5 on pages 24-27 of the specification. The Comparative Examples 2-5 show compositions comprising photoacid generators and after curing, tackiness occurs and the curing is not complete. In the Examples comprising the composition of the instant application, no tackiness occurs.

The examiner would like to point out again that Examples 1-8 and Comparative Examples 2-5 use bis( $\beta$ -epithiopropyl)sulfide as the episulfide compound containing a thiirane ring. However, claim 1 recites "an episulfide compound with a thiirane ring", which encompasses a large number of compounds (see pages 9-12 of the specification) so the Examples 1-8 are not considered commensurate with the scope of claim 1.

As the applicant shows on page 14 of the Remarks, Amagai et al. do not teach the process of curing of episulfide compounds with thiirane rings with photoacid generators so Comparative Examples 2-5 cannot be considered as the closest examples to the applied prior art. The applicant argues that Amagai et al. do not disclose photoacid generators and do not disclose a photocuring process, as in the instant application.

The examiner would like to show that Amagai et al. teach that "the episulfide compounds can be polymerized/cured in the presence of a curing catalyst and any of the known curing catalysts for epoxy resins can be used " (column 9, lines 54-58).

Tachi et al. disclose a process of crosslinking of poly(glycidyl methacrylate) using photobase generators (page 1331). As the poly(glycidyl methacrylate) cures by crosslinking, as evidenced by Haniu et al. in par.0157, the process of Tachi et al. is a process of curing the poly(glycidyl methacrylate) and the photobase generators are not only crosslinking catalysts but also curing catalysts.

One of ordinary skill in the art would be then motivated to use the photobase generators of Tachi et al, which are crosslinking/curing catalysts for the epoxy-containing glycidyl methacrylates in the photopolymerization/curing of Amagai et al.

On pages 15-17, the applicant shows the features of the composition of the instant application, as in the amended claims 1 and 4. The arguments have been considered. However, new grounds of rejection of claims 1 and 4 are presented in paragraph 8 above.

On pages 17-19 of the Remarks, the applicant addresses issues regarding Amagai et al.

The applicant shows that Amagai et al. disclose episulfide compounds, which polymerize and cure in the presence of a curing catalyst to prepare an optical material. Amagai et al. disclose that any of the known catalysts known for the epoxy resins may be used and teach various curing catalysts.

The applicant further argues that Amagai et al. disclose a process of thermal curing but do not teach a process of photocuring, as in the instant application.

The applicant further shows that Amagai et al. disclose many curing catalysts in column 9, line 59-column 12, line 3 but do not disclose the photo-base generators of the instant application. Amagai et al. also fail to teach the "coating composition including a photocurable composition" of the instant application.

The examiner would like to show that Amagai et al. disclose alkyl sulfide type episulfide compounds with thiirane rings (see formula (I) in column 3). These compounds can be polymerized/cured in the presence of a curing catalyst to prepare an



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optical material. In this polymerization, any of the known curing catalysts for epoxy resins can be used (column 9, lines 51-57).

These teachings would motivate one of ordinary skill in the art to use any curing catalyst known as curing catalyst for epoxy resins in the curable composition of Amagai et al.

Amagai et al. do not specifically restrict the curing process to a thermal curing. As "any known curing catalysts for epoxy resins" may be used in the composition, it is the examiner's position that a catalyst for photocuring of epoxy resins may be used.

As shown in paragraph 8 above, the use of the composition of the instant application as a "coating composition" is merely an intended use and adds no patentable weight to the claim. The composition of Amagai modified by Tachi and Hojo comprises the same components as the composition of the instant application so it is equivalent to it.

On pages 19-22 of the Remarks, the applicant argues Tachi et al.

The applicant shows that Tachi et al. shows photo-base generators used for the photo-initiated thermal crosslinking of poly(glycidyl methacrylate). The applicant further argues that Tachi et al. do not mention optical materials, as Amagai et al.

On pages 20-21 of the Remarks, the applicant argues that the episulfides of Amagai et al. are quite different in properties than poly(glycidyl methacrylate).

The examiner agrees that episulfide compounds and poly(glycidyl methacrylate) are different but maintains the position that Amagai's teaching that "the episulfide compounds can be polymerized/cured in the presence of a curing catalyst to prepare an

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optical material, any of the known curing catalysts for epoxy resins being used " (column 9, lines 54-57) would motivate one of ordinary skill in the art to use the photobase generators of Tachi et al. as curing catalyst for the episulfide compounds, the photobase generators of Tachi et al. being taught as crosslinking/curing catalysts for epoxy-containing poly(glycidyl methacrylate) resins.

On page 23 of the Remarks, the applicant underlines again the unexpectedly better results achieved by the composition of the instant application. The compositions of the instant application show excellent curing properties, which were not taught by the prior art references.

The examiner would like to show that the examples in the specification use bis( $\beta$ -epithiopropyl)sulfide as the episulfide compound containing a thiirane ring. However, claim 1 recites "an episulfide compound with a thiirane ring", which encompasses a large number of compounds (see pages 9-12 of the specification) so the Examples are not considered commensurate with the scope of claim 1.

On pages 23-24, the applicant argues Hojo et al.

Hojo et al. disclose a photocurable composition for formation of a finely embossed surface structure on an optical article, wherein said photocurable composition comprises a release agent, such as a silicone-type release agent. The applicant further argues that the composition of Hojo et al. comprises inorganic superfine particles in the order of sub-micron (par.0031-0032 and par.0037).

The examiner would like to show that Hojo et al. was only relied upon to show that modified silicone oil is known in the art of optical materials as release agent. As

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Amagai et al. teach a curable composition for optical articles, one of ordinary skill in the art at the time of the invention would be motivated to look at Hojo et al, who teaches curable compositions for optical articles. Furthermore, Amagai et al. disclose a release agent so one of ordinary skill in the art would be motivated to use a modified silicon oil as release agent, based on Hojo's teachings.

On page 24 of the Remarks, the applicant argues Ishii et al.

The rejection of claims 23-25 under 35 USC 103(a) over Amagai et al. (US Patent 5,807,975) in view of Tachi et al. and Hojo et al.(US Pg-Pub 2003/0129385) and in further view of Ishii et al. (US Pg-Pub 2003/0195270) is withdrawn so the applicant's arguments regarding Ishii et al. are moot.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/A. E./

Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795